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Abstract of bachelor's thesis

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Title of thesis Linguistic signs within financial reports that forecast trouble for companies

Degree Bachelor's degree

Degree programme Accounting

Thesis advisor(s) Tapani Kykkänen

Year of approval 2020 **Number of pages** 25 **Language** English

Abstract

The importance of financial information has grown in the recent years as the business environment and industries have become more complex. Simultaneously it has become more important for investors to be able to analyze thoroughly all parts of financial reports as a textual analysis can reveal something that the numeric key figures do not. Thus, it is useful to recognize key components and noteworthy signals also within the text parts of financial reports.

The thesis is a literature review on the topic of linguistic attributes in financial reporting. It at first investigates how the textual information disclosure in financial reports is regulated and then proceeds to review the existing literature on three different signs of trouble within financial statement texts. The aim is to find answers to two research questions: which linguistic signs implicate problems, and what kind of financial problems can the signs be associated with. The results show correlation between textual characteristics such as text length and tone ambiguity, and financial problems like lower earnings and stricter loan terms.

Keywords financial report, linguistics, information disclosure

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LINGUISTIC SIGNS WITHIN FINANCIAL REPORTS THAT FORECAST TROUBLE FOR COMPANIES

Bachelor's Thesis

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Accounting

Fall 2020

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1. Introduction

Annual financial reports are used by investors to evaluate loan conditions and to estimate company value and by companies as a primary public communication channel to the outer business world. (Cascino et al. 2013, Palepu et al. 2020) Hence, the usability and reliability of the reports is an important factor to every different interest group of a company. Due to the economic importance of financial reporting and the large outside interest in it, company managers may attempt to conceal unfavorable business forecasts and awkward revelations within financial reports. Such behavior is motivated by benefits such as lower cost of capital and maintaining high stock prices. (Bloomfield 2002) The issue is very current; the topics of concealing information, uncertainty within financial reports, tone of management reporting and the effects of the concealing have been widely researched and discussed among recent scientific accounting releases. (e.g. Bloomfield 2002 & 2008, Clatworthy & Jones 2003, Henry 2008, Li 2008, You et al. 2009, Lehavy et al. 2011, Loughran & McDonald 2011, 2014 & 2016, Davis et al. 2012, Demers & Vega 2014, Huang 2014, Ajina et al. 2016, Kahveci 2016, Lo et al. 2016, Ertugrul et al. 2017, Kim 2018)

The previous research on the topic has focused on finding a descriptive measurement of low readability and unclearness in financial reports, and the linkage between the level of readability and business success, cost of capital and stock price development and many other parameters. (Loughran & McDonald 2014) The methods of measure have consisted of for example Fog Index and file size comparison. (Ertugrul et al. 2017) In addition to such statistical analysis, some evidence has also been gathered by interviewing management personnel and other types of qualitative analysis. The results have shown that there are observable and measurable linguistic methods to conceal bad news and problems within financial documents. (Li 2008, Loughran & McDonald 2011, 2014 & 2016, Ajina et al. 2016, Kim 2018)

However, even though the research has focused on broad scale of topic-related issues such as outcomes, motives, and effects of low readability and concealing information within financial texts, most importantly finding connection between financial determinants and readability, the area is still in no way studied completely and from

all perspectives. A conclusive and combining thesis about the findings of existing research is beneficial here, because it visualizes the discussion between the articles. It also provides a basis for analysis of what kind of empirical or statistical studies are still needed for more information and comprehension about linguistics in accounting.

Understanding the methods of concealing information, and learning to observe and notice non-numeric signs of trouble is helpful to anyone who uses financial information, because it develops the critical analyzing of business-related texts and allows investors to incorporate the available information better into the stock market prices. (Ertugrul et al. 2017) Identification of dodgy linguistic attributes and other types of text abnormality can possibly reveal something that typical numeric analysis does not. The connection between text attributes and financial parameters have been statistically significantly proven by several prestigious research articles. (e.g. Li 2008, Loughran & McDonald 2014 & 2016, Ertugrul et al. 2017) Hence, the economic effect of linguistics in accounting and financial reporting cannot be overlooked.

1.1 Research objectives and research questions

The objective of this paper is to study non-numeric and linguistic signs within financial reporting that forecast future or already existing troubles for companies. The purpose is to combine and analyze information about alleged signs of trouble and find relevant ways to measure them, as well as discuss, what kind of signs are indeed proven with reliable evidence to project future troubles likely and accurately. The increasing textuality of accounting and the growing importance of transparent communication to stakeholders make the topic very actual and interesting to study.

The research questions are defined as follows:

RQ1: Which linguistic signs within a financial report significantly implicate future troubles?

RQ2: What kinds of troubles are to be expected when a company's reporting is not clear or readable?

1.2 Research methodology

The research method of this paper is a literature review. The literature selected consists of prestigious articles and studies found by using academic search engines such as Scopus and Google Scholar. The selection process of literature and the construction of the text have focused on creating true and fair discussion between articles and establishing a descriptive big picture of the research issue through enough variety within the literature selection.

1.3 Structure of the research

The rest of the study is followingly structured. Section two, the literature review, first analyzes the definition of bad news in business environment, and how companies are regulated on the matter of information disclosure. Then, after a short introduction to linguistic research in accounting, studies that handle three different signs of suspected information concealing are compared and reviewed. The three parts are file size and annual report length, the frequency of multi-syllable words in a report and finally tone analysis of negativity, positivity, and ambiguity in reporting. Section three discusses the findings and results of the study, and section four serves as the conclusion for the paper.

2. Literature review

2.1 Definition of bad news and presentation of information regulations

Before dwelling into the actual topic of concealing financial information, it is important to define, what are the bad news or forecasts that managers and companies want to hide or soften when communicating with the outer business world. According to Ertugrul et al. (2017), companies may hoard and conceal information concerning deteriorating business conditions, increased risks, and downward pressure on asset values. In other words, bad news to a business can be defined as a broad scale of possible issues like losing profitability, a sudden increase in risks, troubles with the supply chain and loss of value considering important company properties. To conclude, bad news in business environment are usually related to declining company performance. (Clatworthy & Jones 2003)

How are companies advised and regulated on the matter of information disclosure? For example, a quotation from the Finnish Accounting Act (31.12.1997/1336) regulates the management report in the following way:
"The management report shall describe the reporting entities:
1) development of operations and profitability
2) financial position
3) most significant risks and uncertainties."
In other words, the guidelines concerning profitability and financial position, aim to provide further explanation for the numbers presented in the annual report. The third, risks and uncertainties, is an attribute perhaps less explicitly present in the annual report. Hence, explaining for example the risks in text format in the management report provides important and usable information for financial statement analysis purposes.

In addition to the three requirements above, the Finnish Accounting Act also demands the companies, that must publish the management report, to disclose information for example about environmental and personnel conditions, upcoming significant events, future developments, research and branches. The scope of information provided in the management report is thus very broad and covers most of the external and internal

corporate attributes. The regulations are also subject to the changing corporate environment and globalization. Information disclosure requirements of companies from different countries have been unified and made somewhat stricter with the recent implementation of International Financial Reporting Standards (IFRS). (Lourenço & Branco 2015)

The purpose of financial statements is to force companies to provide enough information about their profitability and financial condition to the market. (Fridson & Alvarez 2011) The management report regulations are extensive to that purpose; larger companies are required to disclose more insight to their business. However, the vague nature of the management report regulations allows the report to be more informal. This makes it intriguing to study, how accurately the textual sections of reports represent the actual business conditions and development. The use of language in financial reporting plays a big part as well, since analyzing it can show that beyond the reports, there is something that companies prefer to hide. (Loughran & McDonald 2011) Most studies used in this research paper have been conducted in the United States, where the Securities Exchange Act of 1934 forces publicly traded companies to release annually a Form 10-K file, which basically consists of similar items as the Finnish financial statement and management report together, resulting in a deep insight to company's business.

This study's discussion and conclusions aim to be for the most part applicable also to the European business environment, as the relationship between financial reporting texts and information concealing is a global issue. The globality and usability of the accounting linguistic theories beyond borders have been proven for example by a few European research articles, such as an analysis based on French accounting readability and earnings management (Ajina et al. 2016), an analysis about management commentary readability in Italy (Ginesti et al. 2017) and a Turkish study of the role of tone in annual reports in improving the corporate communication with its stakeholders (Kahveci 2016).

2.2 Linguistic, implicit signs of bad news in financial reporting

When considering the point-of-view of business environment, the research on the bad news mentioned earlier seems to be roughly divided into three types. First type of bad news is a business problem that has already happened and is in some way visible to the public, requiring somewhat an immediate reaction or explanation. These reactions to publicly known incidences have been studied extensively for example in the article by Clatworthy & Jones (2003).

The second type is a problem that the company can foresee happening soon or exists already without the knowledge of the public and can yet be hidden within annual report texts and data. The research of this phenomenon named for example "Incomplete revelation hypothesis" by Bloomfield (2002), has been done mostly in a retrospective sense: the linguistic characteristics of financial reports have been compared with financial parameters' development afterwards the reports. Notable examples of such research are for instance Loughran & McDonald's study (2014) and the article by Ertugrul et al. (2017).

In addition to the two types, there is also the incidence of companies intentionally managing earnings to tell shareholders an improved story about the company's level of income. This so-called earnings management and its detectability through linguistic and readability analysis has been the focus of studies such as Lo et al. (2016) and Ajina et al. (2016).

Existing research related to the topic of financial reporting linguistics and their relation to business success has focused on assessing the financial report readability and its components and comparing it with financial parameters. (Li 2008) The main measurements for the level of readability have included for example Form 10-K file size and annual report length (Li 2008, Loughran & McDonald 2014, Ertugrul et al.2017), the amount of multi-syllable words in a text, often measured with the Fog index (Li 2008, Ajina 2016, Lo et al. 2017) and the frequency of ambiguous, uncertain words (Loughran & McDonald 2011, Kim 2018). This research paper aims to focus on covering textual signs that implicate future problems and linguistic ways managers

might use to bury awkward financial revelations and bad news within financial reporting; crisis communication and direct delivery of bad news are not handled.

2.2.1 Form 10-K file size and annual report length

To clarify the terminology used, the Form 10-K is an annual document the U.S. Securities and Exchange Commission (SEC) require publicly traded companies in the United States to release. According to the SEC, the content of Form 10-K is very similar to a typical annual report, but it is more detailed and there are more requirements for the content. The requirements overlap each other at many points though, and some companies opt to release the 10-K and annual report as the same document. In the scientific research articles of Li (2008), Loughran & McDonald (2014), Lo et al. (2016) and Ertugrul et al. (2017) the two terms are sometimes used to describe the same report, so it seems that in the context of linguistic issues both are as usable for research purposes.

The SEC has also introduced the plain English rule 421(d) (1998) to make financial texts easier to read for the target audience like investors and analysts. (Loughran & McDonald 2014; Kim 2018) The rule attempts to urge firms to use plain, readable English in all their financial disclosures, instead of unclear, difficult business jargon. (Kim 2018). The implementation of the rule has increasingly brought the research attention to the readability of the business texts; most research articles combining readability and accounting have been released in the last twenty years.

Are there enough differences between the text amounts of Form 10-Ks or annual reports for an effective research? It seems that many parts of the typical 10-K file are text-focused and thus great sources for linguistic information; for example, Li (2008) has studied two distinctive subsections of the annual report, managerial discussion & analysis (MD & A) and notes to the financial statements, in addition to studying the whole annual report itself. The results have proven that there are statistically significant differences between companies' MD & A and notes to the financial statements text amounts, which has given reasonable data to compare with financial success, earnings persistence, and other measures.

The main theory when considering the relationship between the information concealing and 10-K size is that the bigger the file or the longer the text, the more unnecessary data it contains to mislead the information users from the actual issues and problems of the company. (Bloomfield 2002, Li 2008) This claim is supported for example by a survey conducted by Loughran & McDonald (2014): "We informally polled a small sample of partners of major accounting firms and asked how they would legally attempt to obscure information whose disclosure was required. The accountants immediately identified the strategy of burying the awkward revelation in an overwhelming amount of uninformative text and data." Quantitative research on the topic is also very comprehensive. For instance, Li (2008) has tested a hypothesis if the length of an annual report could be used strategically by managers in order to make an annual report less transparent and to hide adverse information from investors.

To make assumptions whether a big amount of information within a financial report is a sign of bad news or nothing of importance, one must delve a little deeper into the existing research papers and compare the evidence and results. The researches about the topic are a good source of information in a sense that they investigate the problem from slightly different point-of-views, giving a lot of substance for an analysis. Not only earnings-related research questions have been studied; stock price and loan conditions (Ertugrul et al. 2017), firm investment efficiency (Biddle et al. 2009) and analyst reacting (Kim 2018) have been researched as well. One matter of discussion has also been, how to measure most descriptively the readability, clarity and compactness of a Form 10-K or an annual report. Suggestions have included for example word count, file size and the amount of complex words. (Li 2008; Loughran & McDonald 2014)

First off, Li's study (2008) considers if the Fog index and the length of the annual report and two smaller text-focused sections of it, correlate with earnings persistence and current earnings level of a company. He uses a very simple definition for the length of an annual report: the natural logarithm of word amount. However, already a very interesting perception can be made from the finding that the word amounts of 10-K files have a huge variation: In Li's sample, the 25th percentile is listed at 15,173 words, whereas the 75th is at 36,926 words. Samples of other studies such as Loughran & McDonald's (2011) and Kim's (2018) tell a similar story: the reports differ greatly in length, which provides a fruity base for analysis. Another important notion Li makes is

that the reporting lengths should not be blindly compared without the implementation of variables like firm size, age, general volatility of the branch and complexity of operations. They all can affect how difficult and complicated it is to explain company's position, future, and operations, instead of bad news on business front causing the explaining difficulties. Thus, he and many other researchers, have adjusted their findings with the knowledge of the firm-specific variables and environmental effects.

The findings of the statistical analysis support the hypothesis of hiding bad news behind long texts: the firms that operate on a loss have generally longer annual reports, MD & A and notes to the financial statements. Especially the notes section's length analysis shows a statistically significant negative correlation with earnings, as according to Li, "the length of the Notes is more likely to be used as a strategic deterrence to investors". Moreover, a more economically significant finding in Li's study is that among companies that generate profit, the ones with longer annual reports and key texts within are subject to less persistent earnings. In other words, the result of Li's study means that longer reports and notes are signs of increasingly volatile earnings coming up. The meaning of volatility in this context is not always earnings movement to the bad direction, but it tends to make company valuation and decision making harder for investors. (Koopman & Hol 2000) Li summarizes the findings of the research followingly: "First, annual reports of firms with poor performance are more difficult to read. The effect is statistically (but not economically) significant. Second, the profits of firms with annual reports that are easier to read are more persistent. The effect is economically significant."

Not all researchers entirely agree with Li's (2008) methods of measure. For example, Loughran & McDonald (2014) challenge Li's way of using the logarithm of word count as a measure for the annual report length. They prove in their research, that simply using the 10-K file size as the measurement of readability and length of a report is an easier and more reliable way, as it is the only method that does not require parsing of the 10-K data, thus leaving less possibilities for algorithm errors. Moreover, Lo et al. (2016) add to Li's research by proposing that firms most likely to have managed earnings to beat the prior year's results have MD&As sections of annual reports that are longer and more complex. The term "managed earnings" describes the phenomenon of managers using judgment in financial reporting and structuring

transactions to alter financial reports to mislead stakeholders about the economical state of the company or to influence contractual outcomes that depend on accounting numbers. (Nelson et al. 2002)

The findings of Lo et al. (2016) are very interesting as their statistical analysis shows that companies, that have met or slightly beaten the earlier year's earnings, have generally longer and more complex MD & A sections within annual reports. According to them, this effect is even more significant when the readability measurements are tested on firms that are suspected of managing earnings. Ajina et al. (2016) also find similar evidence when studying the readability of French companies' annual reports compared to evidence of earnings management. Lo et al. (2016) state however that it is unclear, whether the reason behind the low readability and long texts here is bad performance being harder to communicate or the companies deliberately confusing the stakeholders, the phenomenon of obfuscation. The key idea still stands the same; longer texts in annual reports are likely to be a sign of something troublesome.

Further Form 10-K size and length research has been conducted for example by Ertugrul et al. (2017). In their study, the relationships between the size of 10-K files and loan conditions & stock price crash risk are analyzed. The findings are on level with the previous research results of longer, less readable reporting causing more volatile earnings: firms with a larger Form 10-K file size face higher loan spreads and more restrictive contract terms, such as shorter maturity and a greater likelihood of collateral requirements. The research by Ertugrul et al. (2017) provides evidence that low readability and large 10-K report file size are key determinants to stricter loan terms, which makes sense as according to Xu (2020), uncertainty surrounding a company or business environment as a whole usually means capital becoming more difficult to acquire. Ertugrul et al. (2017) also state that banks may increase their level of monitoring the companies that release less readable, complex reporting information.

Ertugrul et al. (2017) also test the hypothesis of higher stock price crash risk being linked with the larger 10-K file size. Already Bloomfield (2002) has presented the idea of companies attempting to hide bad news to delay the effect they would have on the market price of their stock. The analysis by Ertugrul et al. (2017) of stock price

development after released 10-K files proves that firms that have bigger annual report file sizes suffer more likely stock price crashes in the future. This notion implicates that Bloomfield's idea is truthful: firms may be able to hide information from the public markets for the time being, but at some point sooner or later the bad news and revelations often become visible in the stock price in the form of a crash.

2.2.2 Multi-syllable word amount within a financial text

A lot of prestigious research has focused on determining the readability of a text in general, as researchers have attempted to evaluate, how difficult it is to for a reader to comprehend the contents of a text. (Loughran & McDonald 2014) According to linguistic research, two attributes of a text, the frequency of multi-syllable words and average length of a sentence, are descriptive indicators for simplicity and clarity of a text. (Gunning 1952) A mathematic well-known measure of general readability, that utilizes the aforementioned attributes, is the Gunning-Fog index. The formula of the Fog index is the following:

Fog = (words_per_sentence + percent_of_complex_words) * 0,4

In the Fog index the definition of a complex word is that it contains three or more syllables. The result of the index describes the amount of years of formal education an average-intelligence reader must have to comprehend the text after just one readthrough. The instructed values are as follows: Fog of >18 means the text is unreadable, 14–18 "difficult", 12–14 "ideal", 10–12 "acceptable", and 8–10 "childish". (Li 2008)

More recently, the use of Fog index as a measure of readability has reached scientific accounting research as well. Many researchers have tested the Fog indices of 10-K files, annual reports, and other business-related texts to find connection between a high use of multi-syllable words and business difficulties. On the topic of using Fog index to test the level of readability in accounting texts, Li's research (2008) is a pioneer. He has studied the Fog indices of 55,719 different US companies' 10-K files and found that the median Fog index of a Form 10-K is as high as 19,24. The higher Fog index is also sign of more volatile earnings persistence according to Li, which according to him shows

that there is some relation between the Fog and business success. Ajina et al. (2016) also link higher Fog index to earnings management.

Is the Fog index a good measurement for readability in the context of financial reporting though? For instance, Loughran & McDonald (2014) find it very suspicious that 10-K files are mostly classified as "unreadable" in the statistical analyses conducted by many researchers. Even in their own study with the goal of finding a descriptive measurement for readability in business text, the Fog indices of the 10th and the 90th percentile of the 10K file data of thousands of companies, are respectively 17,13 and 20,26, which means that the variation between 10-Ks' Fog indices is not very significant; the texts are mostly "unreadable" or at the top end of "difficult". Also, Loughran & McDonald (2014) attempt to provide an explanation to this Fog index-measured presumably hard readability of financial texts. They find that "out of more than 45,000 different complex words appearing in 10-Ks during our sample period, only 52 words account for more than a quarter of the total complex word count". Basically, it is suggested the 52 words like "financial", "operations" and "agreement" are mostly so common business language that an investor with prior experience of reading financial texts comprehends them without confusion despite the length and amount of syllables of the words.

Loughran & McDonald (2014) question the sentence length part of the Fog index formula as well. They claim that financial texts often include a high frequency of bullet points, which are not detected as separate sentences by the algorithm used to determine the Fog index of a 10-K. This can result in the algorithm reporting that the sentences in a text are way longer than they actually are. All in all, the Fog index seems a bit inaccurate when used in measuring the readability of a business text, but as many accounting researchers (e.g. Li 2008, Ajina et al. 2016, Lo et al. 2016, Ertugrul et al. 2017) have done, it can be used as an additional test determinant for low readability and its effects.

2.2.3 Negative, positive, and ambiguous tone in annual reports

It is a considerably new research idea to study the frequency of uncertain words and weak modal verbs in the context of business releases. Instead of research on uncertainty and weakness of tone in business text, the negativity versus positivity of tone has been the subject of research for a longer time. Examples of such research include the studies by Frankel, Mayew, and Sun (2010), Davis, Piger, and Sedor (2012) and Demers & Vega (2014).

However, the research methods when studying negative and positive tone or ambiguous tone in annual reports do not differ much, if at all. (Loughran & McDonald 2016) In fact, studies of both have featured the use of word lists for the purpose of statistical analysis. The challenging part of using word lists and dictionaries for the research purposes is that a comprehensive list, that includes all or at least most of the category's words, is difficult to create. For instance, Henry's (2008) study has received criticism because her list of negative words contains only 85 different words, missing some very common negative business-related words, like "loss" and "adverse". Loughran & McDonald (2016) argue that managers have many more ways to express negative tone in business context than only the 85 words. To help with this problem, longer, more comprehensive word lists are also available for textual analysis. Possibly useful examples of such in business context are Harvard's IV-4 and Diction word lists, which include several thousands of words. (e.g. Kothari et al. 2009)

Another trouble with the word list research is that some specific words share two or more meanings despite the same spelling. For example, the word "may" is both a word expressing uncertainty as well as the month (if the parsing system cannot recognize capital letters from lowercase letters), and some industries can be deemed unnecessarily negative because of extensive use of some negative words, such as health industry that frequently uses the word "death". (Loughran & McDonald 2016)

The topic of tone negativity and positivity has often been analyzed from two different perspectives. Firstly, in which way the stock market reacts to different tones in financial reporting texts and secondly, does the tone represent the actual corporate conditions, or implicitly signal about something that is required to be disclosed.

Despite the challenges surrounding the tone research in business, many studies have been successfully conducted with comparable results. A noteworthy finding is that neither a negative nor an abnormally positive tone in a financial release is a good sign. For instance, Huang et al. (2014) find that abnormally positive tone in earnings press releases is significantly linked with poor income and cash flows for up to three years after the initial release. Davis et al. (2012) however present that managers' use of optimistic language is positively related to expected future firm performance in the form of return on assets for example. According to Henry's research (2008), firms with positive tone in the question-and-answer part of the corporate conference call experience significantly higher short-term stock returns whereas conference calls with negative tone have negative abnormal short-term returns, as in they perform worse than anticipated.

To conclude the positive and negative tone research findings, it seems that also abnormality in the frequency of the use of positive language should be taken as a warning sign. A high rate of negativity, when measured correctly, correlates significantly with a near-future negative market reaction and worse business success, but so does an overly positive tone. (Huang et al. 2014; Loughran & McDonald 2016)

The less studied attribute of financial reports, ambiguity, has only recently attracted interest from accounting researchers. The works of Ertugrul et al. (2017), that studies also tone ambiguity along with other variables as one of the determinants for bank loan terms and stock price crash risk, and Kim (2018), that focuses on the effect of uncertain tone in 10-K files on analyst forecasts, are among the first researches focusing on the topic of tone ambiguity in financial reporting. The idea of studying the economic effect of uncertain tone stems from the Loughran & McDonald (2011) article, in which they have designed five different word lists for linguistics-related accounting research, one being tone ambiguity. In the article it is however stated that it is not clear, if textual analysis can explain stock returns and other parameters of business success. Nevertheless, Loughran & McDonald (2011) leave the door open for future research by writing that "textual analysis can contribute to our ability to understand the impact of information on stock returns" and that tone research could also serve as a pathfinder to capture other sources of information.

Ertugrul et al. (2017) approach the tone ambiguity subject from the same perspective as their research as a whole: to examine the impact of a few variables, for example tone, on bank loans and stock price crash risk. The research method used is straight-forward: the percentage of uncertain and weak modal words is examined to find connection to phenomena mentioned before. Their word list for the statistical analysis included words such as "might", "possible" and "somewhat" to indicate lower confidence, and words like "approximate", "assume", "contingent", "depend", and "indefinite" to show imprecision. The study results show in fact significant statistical correlation: Ertugrul et al. (2017) find that more uncertain and weaker tone in Form 10-K reporting is indeed connected to companies having higher loan spreads, shorter maturity of loans and more secured loan. It is argued in the research paper that stricter loan terms result from precise and reliable information being harder to extract from ambiguous and weak 10-K files, as they are a sign of a riskier loan investment for the bank. The findings concerning the stock price crash risk are also similar: high percentage of uncertain and weak modal words intensify the future crash risk. Therefore, Ertugrul et al. (2017) suggest that managers who are trying to conceal information about a bad outlook are more likely to use ambiguous language in their 10-K documents.

The work of Kim (2018), likewise to the research of Ertugrul et al. (2017), examines the associations of ambiguous tone in 10-K files to various attributes such as firm size and age, and volatility of stock return and earnings. More importantly, Kim's research takes a deeper insight on an intriguing group of accounting information users, the analysts. The main object of Kim's study is to find out how significantly the uncertain and weak modal words in 10-K files affect analysts' behavior and forecast outcomes. The methodology behind the Kim's research also utilizes the word list format of measuring the frequency of uncertain and weak modal words in a text, so the research is essentially similar and its results comparable to Ertugrul's study. The findings of Kim include an interesting detail: he proves that companies with a more ambiguous tone in their 10-K files attract a larger analyst following, but in the meanwhile the analysts are more unified about the future forecasts of companies that have released more uncertain and weaker files.

Moreover, according to Kim, the increased use of uncertain tone of 10-K files leads to more accurate analyst forecasts and to a decrease of uncertainty in analysts'

information environment. This finding is very paradoxical considering that uncertainty and ambiguity have been connected in the former subject-related research to information concealing and hiding bleak future news. (e.g. Li 2008, Loughran & McDonald 2011, 2014 & 2016) Kim suggests that the reason behind this paradox could be that managers may actually "signal the market participants about their future earnings, which in turn reduces uncertainty in analysts' overall and common information environment". This however contradicts greatly with the Incomplete Revelation Hypothesis of Bloomfield (2002) and further studies (e.g. Li 2008, Lo et al. 2016) of the subject that assume the ambiguous tone to be more of a way to prevent bad news being disclosed to market. Kim states though, that to receive further confirmation and explanations for his controversial findings, more research, perhaps interviews with analysts are needed.

The main finding of the tone-related accounting reporting research is that different kinds of tone abnormalities are significantly linked to risks, volatility, and difficulties in the current and the future business environment. (Ertugrul et al. 2017, Kim 2018) The current research accomplishments leave however a lot of room for more quantitative and qualitative research to find reliable connections and even possible causation between the variables.

3. Results and analysis

The existing research on the topic of signs of information concealing and its corresponding effects is, as expected, broad and recent. As accounting reporting is becoming more and more textual because of increasing business complexity and transparency requirements by authorities, the necessity and motivation to study the linguistic attributes of business have grown simultaneously. (Li 2008; Loughran & McDonald 2014) To begin drawing conclusions and results from research evidence used, this section is going to compare the literature review findings to the research questions presented in the introduction phase of the paper.

The first research question is formatted "Which linguistic signs within a financial report significantly implicate future troubles?", which in other words seeks to find the most relevant signs for an individual, for example an investor or stakeholder, to measure and watch out in the business rhetoric context for the purpose of decision-making. The discussion about the relevance of the linguistic signs takes place in most, if not all the studies that attempt to quantitatively gauge linguistic elements of financial reporting text.

The studies give indirect suggestions to solve the question. It is statistically proven that annual reports of poor-performing firms are longer and less readable on average than the reports of better performers, so that may give us a lead to follow. There are however no absolute rules or definite causation in the existing research, so other environmental factors always need to be weighted in as well before drawing conclusions. Considering the RQ1, the evidence in the literature studied implicates that when encountering unusually big annual report files or visibly abnormal tone of writing, the managers might have hidden something behind the data and words. Therefore, the answer could be concluded as follows: The users of financial report information should keep an eye out for oddities such as very long walls of text and an overload of data and also for ambiguous, or exceptionally positive or negative tone in text, while simultaneously remembering to factor in other significant financial statement analysis effects as well.

The research question number two continues from the footsteps of the first: now after the warning signs have been defined, the probable consequences are analyzed. The

question format is “What kinds of troubles are to be expected when a company’s reporting is not clear or readable?”. In other words, the financial parameters of companies that provide unclear information are studied.

As discussed in the literature review section of this thesis, the existing research links the signs mentioned in the analysis of RQ1 to information concealing and various financial problems. It is suggested that the problems can cover a wide range from lower company income to stricter loan terms and even association to earnings management. About the earnings, the literature provides proof that less concise reporting increases both the risk of lower subsequent earnings and the volatility of earnings. Stock returns are also subject to more volatility when the unclarity of reporting increases. On some occasions, the risk of the company managing its earnings is considered higher as well, because annual report readability deteriorates in the region where a firm meets or just beats the prior year's earnings.

Capital-related issues are also present more often for firms that do not report in a clear and readable way about their business. Shorter loan maturity and more restrictive non-price contract terms are factors connected to low readability and ambiguous tone in financial reporting. The existing research has not yet covered if the low readability can be linked to equity as well, for example to share issuance problems, but the connection to borrowed capital is proved.

In a nutshell, the important theory considering the annual report readability is that telling lies is more difficult than truth. Lying is difficult to be convincing because the communicator must ensure the consistency of the story throughout the text. Also, when not telling the concise truth, one might come across as too unsure or positive, or simply write too long, suspicious explanations to the presented results. The research on financial reporting linguistics aims to find ways to measure this phenomenon effectively. Other points of focus are, how well the readability and clarity of information is incorporated into the stock market and other structures of business, and what they tell about the state of the company.

4. Conclusion

This thesis is a literature review on the topic of linguistics of information disclosure in accounting. The goal of answering the proposed research questions of what are non-numeric signs of bad news in annual reports and what they might implicate, has been approached through comparing and analyzing different studies that have researched the topic from different perspectives. The thesis has first provided a definition for bad news and a background to how the disclosure is regulated. After that, it has proceeded with a literature review split in three main parts, all discussing different evidence, or methods of information concealing to find answers to the research questions.

The main result of the thesis is the finding that bleak company future and linguistic ways to be discrete about it go hand in hand or are at least likely to be associated together. It is not certain, whether it is the bad news causing the phenomenon of deliberately unclear reporting, or that bad news are just harder to communicate but the relationship between the two is proven to exist by many researchers. Such information can be valuable for investors and stakeholders. An accomplishment of this thesis is also the diverse discussion between the existing literature, which gives ideas for future research.

The practical importance of the study is behind the fact that financial information users need accurate information to make rational decisions. Thus, it is also important to be able to understand and perceive not only typical numeric key figures in financial reports, but also linguistic attributes of financial texts within the reports. The study of linguistics in accounting may also allow the governments to establish more accurate regulations related to textual sections of financial reports.

Despite the growing attention, linguistic aspects remain a less researched field of accounting topics. Therefore, a lot of perspectives are yet uncovered, and ones already studied also benefit from additional and extended research. Perhaps implementing a study similar to the ones focused on in the literature review to analyze the reporting linguistics of Finnish companies would be interesting and teach something new about the financial reporting environment in Finland. In addition to such a simple country-specific idea, doing this literature review also brought up some in-depth research

prospects. For instance, the current business climate due to the Covid-19 pandemic would make it interesting to compare the annual report linguistics of crisis time to the reporting before crisis. Also related to this, an interesting and topical type of analysis could be testing that could textual study predict a company's survival or downfall during these challenging times. The fact is anyhow that textuality is an increasing part of financial reporting, which means that the importance of linguistic study in business is growing and more research will follow in the future.

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